WHAT IS CLAIMED IS:

1. For use in a wireless telecommunication system comprising a base station and a plurality of mobile stations, a method for selecting a best fit transport format combination (TFC) from a transport format combination set that is assigned to at least one mobile station by said base station, said method comprising the steps of:

identifying TFC candidates in said transport format combination set that are not best fit candidates;

deleting from said transport format combination set said TFC candidates that are not best fit candidates until a sole TFC candidate remains; and

identifying said sole remaining TFC candidate as a best fit TFC candidate.

2. The method as set forth in Claim 1 wherein said method further comprises the steps of:

iteratively applying at least one set reduction constraint to said transport format combination set;

deleting TFC candidates from said transport formation combination set that do not meet said at least one set reduction constraint.

3. The method as set forth in Claim 2 wherein said at least one set reduction constraint comprises one of: a pre-selected transport format indicator list, an identified size of a transport block, and a number of transport blocks that equal zero.

4. The method as set forth in Claim 3 wherein said identified size of a transport block corresponds to a size of a protocol data unit of a highest priority logical channel mapped to a dedicated transport channel.

5. The method as set forth in Claim 1 wherein said method further comprises the steps of:

applying an iterative TFC selection algorithm to said transport format combination set;

progressively deleting TFC candidates from said transport format combination set that said iterative TFC selection algorithm identifies as not best fit TFC candidates.

6. The method as set forth in Claim 5 wherein said iterative TFC selection algorithm comprises the steps of:

executing a first iteration to select a first transport format for a first dedicated transport channel of said transport format combination set;

deleting from said transport format combination set all TFC candidates that do not have said first transport format for said first dedicated transport channel.

7. The method as set forth in Claim 6 wherein said iterative TFC selection algorithm further comprises the steps of:

sequentially executing additional iterations to sequentially select additional transport formats for additional dedicated transport channels of said transport format combination set;

deleting from said transport format combination set all TFC candidates that do not have said additional transport formats for said additional dedicated transport channels.

8. The method as set forth in Claim 7 wherein said iterative TFC selection algorithm further comprises the steps of:

continuing said iterations and said deletions until a sole TFC candidate remains; and

identifying said sole remaining TFC candidate as a best fit TFC candidate.

9. The method as set forth in Claim 7 wherein said iterative TFC selection algorithm further comprises the steps of:

updating a Start TFCI Sequence after each iteration of said TFC selection algorithm; and

updating a Current TFCI Sequence after each iteration of said TFC selection algorithm;

wherein said Current TFCI Sequence at the end of an iteration becomes a Start TFCI Sequence for the next iteration.

10. The method as set forth in Claim 9 wherein said iterative TFC selection algorithm further comprises the steps of:

continuing to execute iterations of said TFC selection algorithm until a sole TFCI sequence remains; and

identifying said sole remaining TFCI sequence as a best fit TFC candidate.

11. For use in a wireless telecommunication system comprising a base station and a plurality of mobile stations, a method for selecting a best fit transport format combination (TFC) from a transport format combination set that is assigned to at least one mobile station by said base station, said method comprising the steps of:

applying an iterative TFC selection algorithm to said transport format combination set to identify TFC candidates that are not best fit candidates;

deleting from said transport format combination set said TFC candidates that are not best fit candidates until a sole TFC candidate remains; and

identifying said sole remaining TFC candidate as a best fit TFC candidate.

12. The method as set forth in Claim 11 wherein said iterative TFC selection algorithm comprises the steps of:

(a) prioritizing a plurality of dedicated transport channels of a TFC set for which a transmission time interval coincides with a current time;

(b) serving said prioritized dedicated transport channels sequentially;

(c) inputting a TFC candidate set in a Start TFCI Sequence;

(d) sorting a plurality of ready logical channels;

(e) inputting to a TFC select routine a maximum number of protocol data units waiting for transmission;

(f) selecting TFC candidates;

(g) updating a Current TFCI Sequence;

(h) selecting the best fit transport format for a current dedicated transport channel;

(i) updating a pre-selected transport format indicator list to form a constraint for the next dedicated transport channel; and

(j) determining whether a transport format has been selected for all of the dedicated transport channels in said TFC set.

13. The method as set forth in Claim 12 further comprising the steps of:

going to a next dedicated transport channel when a transport format has not been selected for all of the dedicated transport channels in said TFC set; and

iteratively executing steps (d) through (j) for each dedicated transport channel until a transport format has been selected for all of the dedicated transport channels in said TFC set.

14. The method as set forth in Claim 13 further comprising the steps of:

identifying a sole remaining TFC candidate as a best fit TFC candidate after a transport format has been selected for all of the dedicated transport channels in said TFC set.

15. The method as set forth in Claim 12 wherein said TFC selection algorithm applies multiple set reduction constraints to eliminate TFC candidates that are not best fit candidates.

16. The method as set forth in Claim 15 wherein said multiple set reduction constraints comprise:

a pre-selected transport format indicator list;

an identified size of a transport block; and

a number of transport blocks that equal zero.

17. For use in a wireless telecommunication system comprising a base station and a plurality of mobile stations, user equipment that is capable of selecting a best fit transport format combination (TFC) from a transport format combination set that is assigned to at least one mobile station by said base station, wherein said user equipment comprises:

a protocol stack that identifies TFC candidates in said transport format combination set that are not best fit candidates;

wherein said protocol stack deletes from said transport format combination set said TFC candidates that are not best fit candidates until a sole TFC candidate remains; and

wherein said protocol stack identifies said sole remaining TFC candidate as a best fit TFC candidate.

18. The user equipment as set forth in Claim 17 wherein said protocol stack iteratively applies at least one set reduction constraint to said transport format combination set; and

wherein said protocol stack deletes TFC candidates from said transport formation combination set that do not meet said at least one set reduction constraint.

19. The user equipment as set forth in Claim 18 wherein said at least one set reduction constraint comprises one of: a pre-selected transport format indicator list, an identified size of a transport block, and a number of transport blocks that equal zero.

20. The user equipment as set forth in Claim 17 wherein said protocol stack applies an iterative TFC selection algorithm to said transport format combination set and progressively deletes TFC candidates from said transport format combination set that said iterative TFC selection algorithm identifies as not best fit TFC candidates.

21. For use in a wireless telecommunication system comprising a base station and a plurality of mobile stations, a method for minimizing a search time for selecting a best fit transport format combination (TFC) from a transport format combination set that is assigned to at least one mobile station by said base station, said method comprising the steps of:

applying an iterative TFC selection algorithm to said transport format combination set to identify a TFC candidate that is a best fit candidate in said transport format combination set;

iteratively reducing a size of said transport format combination set to a smaller size; and

iteratively searching said smaller size of said transport format combination set to identify best fit TFC candidates.

22. The method as set forth in Claim 21 further comprising the steps of:

(a) prioritizing a plurality of dedicated transport channels of a TFC set for which a transmission time interval coincides with a current time;

(b) serving said prioritized dedicated transport channels sequentially;

(c) inputting a TFC candidate set in a Start TFCI Sequence;

(d) sorting a plurality of ready logical channels;

(e) inputting to a TFC select routine a maximum number of protocol data units waiting for transmission;

(f) selecting TFC candidates;

(g) updating a Current TFCI Sequence;

(h) selecting the best fit transport format for a current dedicated transport channel;

(i) updating a pre-selected transport format indicator list to form a constraint for the next dedicated transport channel; and

(j) determining whether a transport format has been selected for all of the dedicated transport channels in said TFC set.

23. The method as set forth in Claim 22 further comprising the steps of:

going to a next dedicated transport channel when a transport format has not been selected for all of the dedicated transport channels in said TFC set; and

iteratively executing steps (d) through (j) for each dedicated transport channel until a transport format has been selected for all of the dedicated transport channels in said TFC set.

24. The method as set forth in Claim 23 further comprising the steps of:

identifying a sole remaining TFC candidate as a best fit TFC candidate after a transport format has been selected for all of the dedicated transport channels in said TFC set.

25. The method as set forth in Claim 22 wherein said TFC selection algorithm applies multiple set reduction constraints to eliminate TFC candidates that are not best fit candidates.

26. The method as set forth in Claim 25 wherein said multiple set reduction constraints comprise:

a pre-selected transport format indicator list;

an identified size of a transport block; and

a number of transport blocks that equal zero.